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COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS.

U. S. DEPARTMENT OF AGRICULTURE
AND STATE AGRICULTURAL COLLEGES,
COOPERATING.

STATES RELATIONS SERVICE, OFFICE OF
EXTENSION WORK, NORTH AND WEST,
WASHINGTON, D. C.

BOYS' AND GIRLS' CLUB WORK.

FEEDING AND HOUSING WINTER LAYERS.

Contributed by the Animal Husbandry Division, Bureau of Animal Industry.

The production of eggs in winter is materially influenced by the methods of feeding, housing, and handling of poultry. To get the greatest egg production in the early fall and winter, it is essential to have well-matured pullets which were hatched in March and April. The following methods of feeding and housing will produce good results if one has good stock.



FIG. 1.—Exterior of an inexpensive poultry house.

METHODS OF FEEDING.

Feed the grain in a deep litter on the floor and thus make the hens exercise to get it. The mash may be fed either wet or dry, and should be so regulated that the fowls will get about equal parts of mash and of the scratch grains. It is necessary to give the fowls plenty to eat to get good results, but the birds should always be eager for each feed. In cold weather feed about one-third of the scratch grains in the morning and two-thirds at night, in which way the hens are forced to exercise more than if given all the grain they desired at the morning feed. Scratch grains, mash or ground grains, meat meal, green feed, grit, and shell, should be supplied in the winter.

KIND OF FEED.

Good scratch mixtures may be made of equal parts, by weight, of cracked corn, wheat, and oats, or of two parts of cracked corn and one part each of wheat and oats. If wheat is relatively high in price it may be left out of this latter mixture, and the proportion of beef scrap increased one-fourth in the mash. In addition a mash made of three parts corn meal and one part each of wheat bran, wheat middlings, and beef scrap should be fed. Green feed, such as cabbages, mangel-wurzel beets, cut alfalfa, or sprouted oats should be fed during the winter to replace the green feed which the fowls have been securing in the fields; and beef scrap, skim

milk, cut green bone, or some similar feed is needed to replace the insects which the fowls have been securing on the range.

IMPORTANCE OF BEEF SCRAP.

Beef scrap or feed of this nature is very essential in securing a good supply of eggs during the winter months, and is the one essential feed often omitted. Skim milk or buttermilk will partly take the place of beef scrap if a constant supply can be kept before the fowls, but some beef scrap should also be fed. Waste products from the table and kitchen can be used. As these scraps contain some waste meat, the proportion of beef scrap in the mash can be reduced accordingly. These table scraps can be mixed with the ground grains and fed as a moist mash.

METHOD OF HOUSING.

To obtain good results from a flock of poultry during the winter, all houses and coops should be in good condition, only healthy fowls placed in them, and good care given to the poultry. Houses should be thoroughly cleaned, disinfected, and made tight. If they have earth floors, it is well to remove the top 3 or 4 inches of earth and replace this with dry gravel or sand. If they have cement or wooden floors, remove all litter and dirt and put in 4 or 5 inches of fresh straw litter. Be sure that the houses are tight on three sides and that there is no chance for a draft to strike the hens. If hens roost or are placed in a draft during the fall and winter, colds are sure to develop, which may result in roup and other troubles. From one-third to one-half of the south side, or front, of a poultry house may be made of curtains and windows, but should be under control, so that the openings may be closed gradually as the weather becomes cold. Have muslin curtains in the front of the house or leave a window partly open, even on the coldest nights, to allow some ventilation in the house. Fowls will stand considerable cold air provided it is dry, and ventilation will keep the air thoroughly dry in the house (fig. 1).

THE ESSENTIALS OF A POULTRY HOUSE.

The prime essentials in a poultry house are fresh air, dryness, sunlight, convenience, and space enough to keep the birds comfortable. The house should be located where there is good water and air drainage, and so as to be convenient in management and adjacent to available land. It should face the south or southeast. From 3 to 4 square feet of floor space should be allowed for each hen. Provide one nest for every four or five hens.

Figure 2 gives a plan for a poultry house 10 by 14 feet in size for not more than 50 hens, which can be constructed at an expense of about \$28 for materials. This house has one-half of the front open, but a two-section curtain of burlap or thin muslin which can be closed should be used on the inside of this house to close this opening on cold nights. If the ground is damp, it will be necessary to add a board floor; otherwise an earth floor elevated a few inches above the ground level will be satisfactory. If desired, a cement floor of cheap and simple construction may be laid; such a floor is a good protection against rats. The plan shows a 6-inch shutter on the back just under the eaves, which is recommended for use in the warmer sections of the

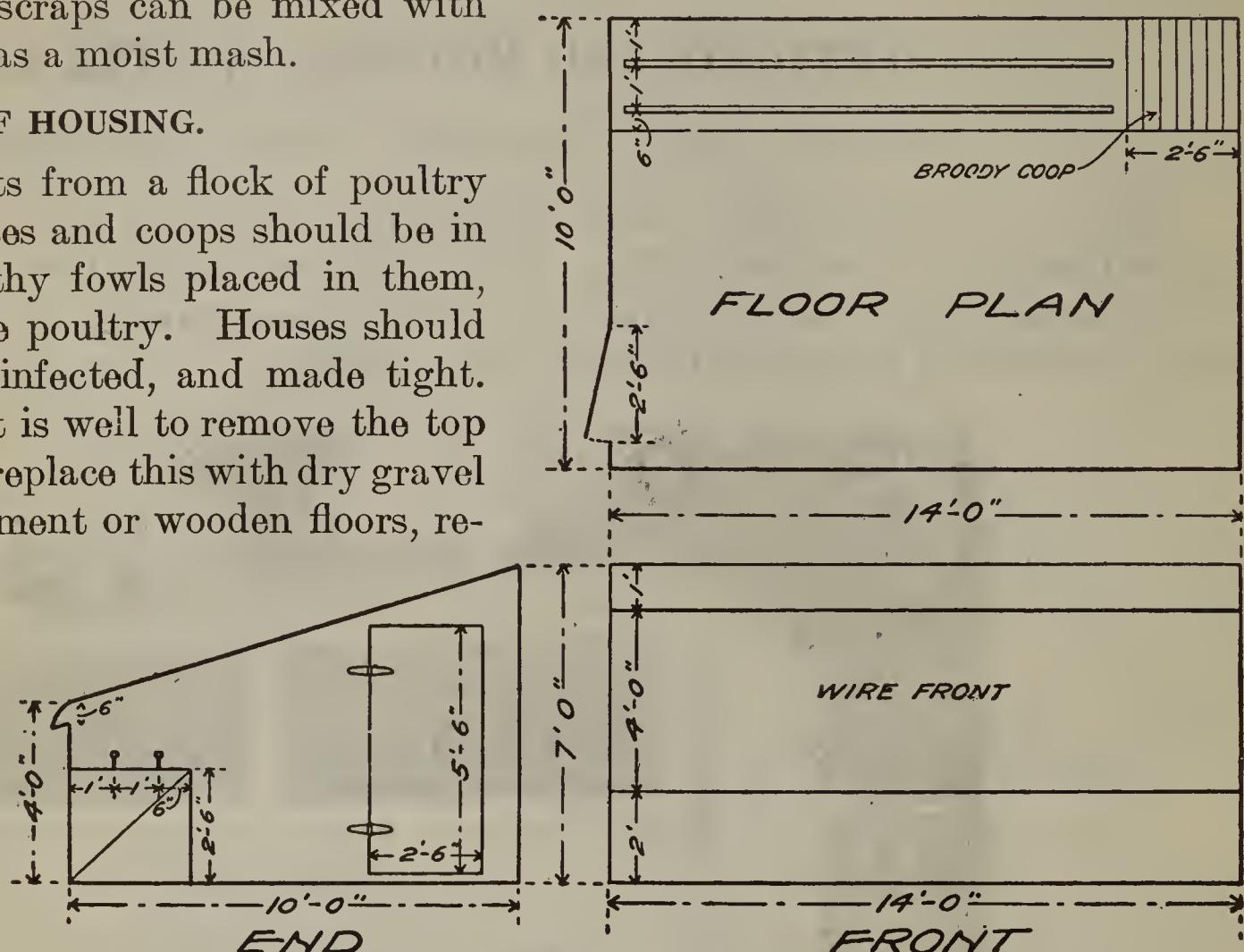


FIG. 2.—Plan of an inexpensive poultry house.

country. This must be constructed so that it can be closed to prevent any draft on the hens in cold weather. The nests may be placed directly under the dropping boards or on the walls of the house but not on the floor (fig. 3). This house may be built any length desired, to accommodate the number of hens to be kept.

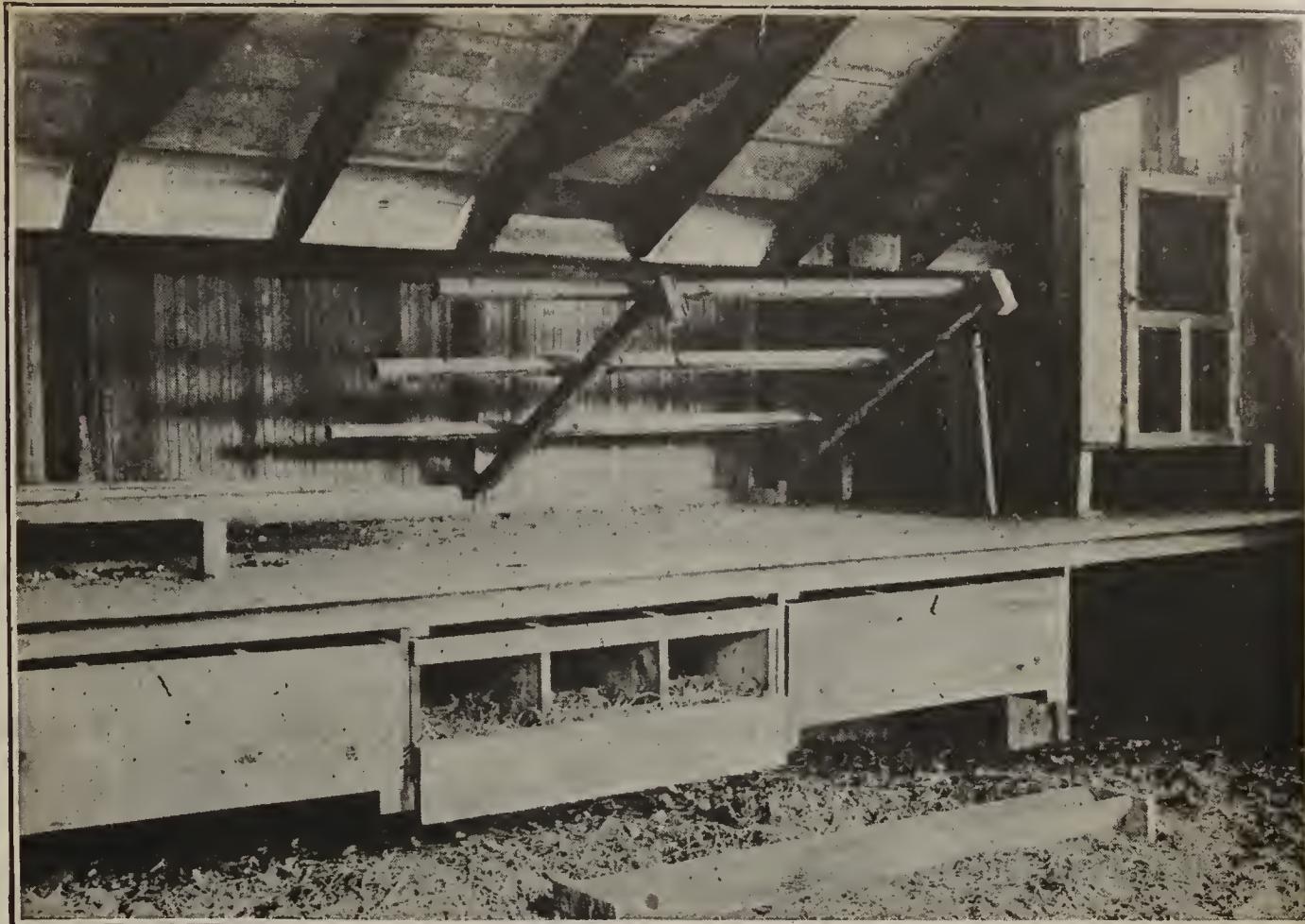


FIG. 3.—How the inside of the house should be arranged. Notice the nests beneath the dropping board and broody coop in the corner. One section of the roosts is raised to allow cleaning the dropping board.

The materials required for building this house are as follows:

- Two pieces 4 by 4 inches by 10 feet, for sills.
- Two pieces 4 by 4 inches by 14 feet, for sills.
- Two pieces 2 by 4 inches by 10 feet, for plates.
- Two pieces 2 by 4 inches by 14 feet, for plates.
- Sixteen pieces 2 by 4 inches by 12 feet, for studs, rafters, and roosts.
- One hundred and twenty square feet of boards 12 feet long, for ends.
- Fifty-six square feet of boards for back.
- Eighty-four square feet of boards for front and dropping boards.
- One hundred and fifty square feet of boards for roof.
- Two hundred and seventy linear feet of 2 by 1 inch battens.
- Total scantling, 226 feet, board measure.
- Total boards, 622 feet, board measure.
- Total lumber, 850 feet, board measure, in addition to battens.
- Two pairs hinges.
- One hundred and fifty square feet roofing paper.
- Nails.
- Fifty-six square feet poultry wire, 2-inch mesh, and same amount of muslin.
- Poultry netting, $\frac{3}{4}$ -inch mesh, can be used in localities where sparrows are troublesome.

Clean the dropping boards at least once a week, and paint or spray the roosts two or three times a year with a coal-tar wood preservative or with crude oil, also using this material in the nest boxes and around the dropping boards. If kerosene oil is used, it should be applied at least twice a month. Have a good supply of sand or dry dirt on hand to use on the dropping boards during the winter.

NOTE.—This is one of a series of follow-up circulars on poultry (the K series) printed for the exclusive use of club members and club leaders. Other persons desiring poultry literature should write to their State agricultural colleges or ask for the bulletins noted on page 4.

**LIST OF PUBLICATIONS RELATING TO POULTRY ISSUED BY ANIMAL HUSBANDRY DIVISION, BUREAU
OF ANIMAL INDUSTRY, U. S. DEPARTMENT OF AGRICULTURE.**

AVAILABLE FOR FREE DISTRIBUTION BY THE DEPARTMENT.

- Standard Varieties of Chickens. (Farmers' Bulletin 51.)
Poultry Management. (Farmers' Bulletin 287.)
Pheasant Raising in the United States. (Farmers' Bulletin 390.)
Caponizing. (Farmers' Bulletin 452.)
Hints to Poultry Raisers. (Farmers' Bulletin 528.)
Important Poultry Diseases. (Farmers' Bulletin 530.)
Boys' and Girls' Poultry Clubs. (Farmers' Bulletin 562.)
Poultry House Construction. (Farmers' Bulletin 574.)
Natural and Artificial Incubation of Hens' Eggs. (Farmers' Bulletin 585.)
Natural and Artificial Brooding of Chickens. (Farmers' Bulletin 624.)
Simple Trap Nest for Poultry. (Farmers' Bulletin 682.)
Squab Raising. (Farmers' Bulletin 684.)
Duck Raising. (Farmers' Bulletin 697.)
Goose Raising. (Farmers' Bulletin 767.)
Turkey Raising. (Farmers' Bulletin 791.)
Mites and Lice on Poultry. (Farmers' Bulletin 801.)
Standard Varieties of Chickens. I. The American Class. (Farmers' Bulletin 806.)

FOR SALE BY THE SUPERINTENDENT OF DOCUMENTS, GOVERNMENT PRINTING OFFICE, WASHINGTON, D. C.

Guinea Fowl and Its Use as Food. (Farmers' Bulletin 234.) Price, 5 cents.

Commercial Fattening of Poultry. (Department Bulletin 21.) Price, 10 cents.

White Diarrhea of Chicks, with Notes on Coccidiosis in Birds. (Bureau of Animal Industry Circular 128.)
Price, 5 cents.

A System of Poultry Accounting. (Bureau of Animal Industry Circular 176.) Price, 5 cents.

(Issued September 5, 1917.)